

REMARKS

This application has been carefully reviewed in light of the Office Action dated January 25, 2005. Claims 10 to 12, 14 to 24, 30 to 35, 37 to 47, 51, 52, 54 to 56, 60, 61 and 63 to 67 are pending in the application, with Claims 13 and 36 having been canceled. Of the claims currently under consideration, Claims 10, 12, 35, 51, 52, 55, 60, 62 and 64 are independent. Reconsideration and further examination are respectfully requested.

As an initial matter, Applicants thank the Examiner for the continued allowance of Claims 20 to 24, 30 to 34, 46, 47, 54, 56, 63, 65 and 67, as well as the continued indication that 13, 14, 36 to 38, 41, 42, 44 and 66 contain allowable subject matter and would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claim 12 is the base claim of objected-to Claim 13 and there are no intervening claims. Claim 12 has been amended to include all of the features of Claim 13 and Claim 13 has been canceled. Accordingly, Applicants submit that Claim 12 is in condition for allowance and respectfully request same.

Claims 52 and 61 are directed to an apparatus and a computer program product, respectively, corresponding to Claim 12. Therefore, Applicants submit that Claims 52 and 61 are also in condition for allowance and respectfully request same.

Claim 35 is the base claim of objected-to Claim 36 and there are no intervening claims. Claim 35 has been amended to include all of the features of Claim 36 and Claim 36 has been canceled. Accordingly, Applicants submit that Claim 35 is in condition for allowance and respectfully request same.

Claims 55 and 64 are directed to an apparatus and a computer program product, respectively, corresponding to Claim 35. Therefore, Applicants submit that Claims 55 and 64 are also in condition for allowance and respectfully request same.

Claims 10 to 11, 15 to 18, 39, 40, 43, 51, 52, 55, 60, 62 and 64 stand rejected under 35 U.S.C. § 103(a) over “Region Growing and Region Merging Image Segmentation” (Ikonomakis) in view of “Seeded Region Growing” (Adams) and U.S. Patent No. 5,734,736 (Palmer). Claims 19 and 45 were rejected under 35 U.S.C. § 103(a) over Ikonomakis, Adams and Palmer, in view of “Image Segmentation and Approximation Through Surface Type Labelling and Region Merging” (Lim). Reconsideration and withdrawal of these rejections are respectfully requested.

Turning now to specific claim language, Claim 10 is directed to a method of segmenting an image, the image comprising a plurality of pixels. The method includes: allocating one or more pixels as seeds; growing regions from the seeds so as to segment the image into regions, wherein only a number of pixels that border the regions are considered, the number being smaller than a total number of pixels that border the regions, and wherein a variable step size is used to scan the bordering pixels, the step size being a function of the quantity of bordering pixels, and the considered pixel that is most similar in a property to a region bordered by the considered pixel is appended to the region to form an expanded region and the property of the expanded region is updated; and repeating said growing step until no pixels bordering the regions are available.

Applicants respectfully submit that independent Claim 10 is distinguishable over Ikonomakis. Furthermore, neither Adams nor Palmer cure the deficiencies of Ikonomakis. Specifically, neither Adams nor Palmer disclose a variable step size used to

scan the bordering pixels with the step size being a function of the quantity of bordering pixels. Therefore, modification of Ikonomakis in light of the disclosures of Adams and Palmer neither discloses nor suggests Applicants' use of a variable step size to scan the bordering pixels with the step size being a function of the quantity of bordering pixels. In light of the forgoing described deficiencies of the cited art, Applicants respectfully submit that Claim 10 is now in condition for allowance and respectfully request same.

Claims 51 and 60 are directed to an apparatus and a computer program product, respectively, corresponding to Claim 10. Therefore, Applicants submit that Claims 51 and 60 are also in condition for allowance and respectfully request same.

The other pending claims in this application are each dependent from the independent claims discussed above and are therefore believed patentable for the same reasons. Because each dependent claim is also deemed to define an additional aspect of the invention, however, individual consideration of each dependent claim on its own merits is respectfully requested.

In view of the foregoing amendments and remarks, the entire application is believed to be in condition for allowance, and such action is respectfully requested at the Examiner's earliest convenience.

Applicants' undersigned attorney may be reached in our Costa Mesa, CA office at (714) 540-8700. All correspondence should continue to be directed to our below-listed address.

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'Frank L. Cire', is written over a horizontal line.

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